

REMARKS

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority under 35 U.S.C. § 119 (a)-(d), and that the certified copy of the priority document has been received.

Drawings:

Applicant thanks the Examiner for indicating that the drawings filed January 22, 2004 have been approved.

Information Disclosure Statement:

Applicant thanks the Examiner for initialing and returning the Form PTO/SB/08 A&B filed on January, 22, 2004, thus indicating that the reference has been considered.

Claim Objections:

The Examiner has been objected to claim 7 under 37 C.F.R. § 1.75(c). Although Applicant believes that the claim as originally written is in proper form, Applicant has amended claim 7 as shown in the previous section. Applicant hereby requests the Examiner reconsider and withdraw the above objection.

Claim Rejections:

Claims 1-8 are all of the claims pending in the present application, and currently all of the claims stand rejected.

35 U.S.C. § 103(a) Rejection – Claims 1-8:

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,830,302 to Masumoto et al.¹ In view of the following discussion, Applicant respectfully traverses the above rejection.

Masumoto discloses that when the output voltage of a D/A converter is larger than a predetermined potential V2, which is midway between a maximum value and a minimum value (ground potential) of that output voltage, a voltage rising waveform is generated. Further, Masumoto also discloses that when the output voltage of the D/A converter is smaller than V2, a voltage falling waveform is generated.

Because of this aspect of the Masumoto device, it is not necessary to provide two D/A converters, and waveform generation discrepancies due to discrepancies in the characteristics between the two D/A converters can be prevented. Thus, a power source for outputting a negative voltage becomes unnecessary, cost reduction and space decrease can be achieved, and stable voltage waveforms can be generated.

However, in view of the following discussions, Applicant submits that Masumoto fails to teach or suggest each and every feature of the claimed invention, or otherwise render the present invention obvious.

First, Masumoto does not describe or otherwise teach a capacitance-potential curve. Therefore, for at least this reason, Applicant submits that Masumoto fails to teach or suggest a voltage between a potential V1, at which a capacitance of a piezoelectric element is maximal in a

¹ Applicant notes that although the Examiner did not specifically list claim 5 in the rejection, Applicant presumes the Examiner intended to list claim 5.

“capacitance-potential curve” of the piezoelectric element, and a potential V2, which has a larger absolute value than an absolute value than an absolute value of the V1 potential and at which an inflection point in the “capacitance-potential curve” is reached. *See* claims 1 and 8.

Second, Applicant submits that Masumoto fails to describe that a potential between a potential V1, at which the capacitance of the piezoelectric element is maximal, and a potential V2, at which an inflection point is reached, is set as a drive start potential V0. *See* claims 1 and 8.

For at least the reasons above, Masumoto fails to teach or suggest each and every feature of the claimed invention, regardless of the Examiner’s assertions of obviousness.

Further, in rejecting the claims, the Examiner admits that Masumoto fails to teach or suggest each and every feature of the claimed invention, but states that changing a potential to a potential V3, at which a driving electric field having an electric field strength of 100 to 500 kV/cm is generated, would have been obvious to a skilled artisan. Applicant respectfully disagrees. In fact, the Examiner’s allegations of obviousness regarding the above aspect of the invention, are essentially a statement of *per se* obviousness. Applicant notes that it is well settled that the arguments of *per se* obviousness are inappropriate and are insufficient to render a claimed invention obvious. To argue that a claim limitation is obvious requires the Examiner to set forth a clear teaching or suggestion in the prior art, which the Examiner has not provided. Thus, Applicant submits that the Examiner’s arguments and statement of obviousness is without merit.

In view of the foregoing, Applicant submits that Masumoto fails to teach or suggest each and every feature of the claimed invention. Further, Applicant submits that the Examiner’s

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statement of obviousness is inappropriate and contrary to the law of obviousness. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness, as required under 35 U.S.C. § 103(a). Accordingly, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of the claims.

Conclusion:

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

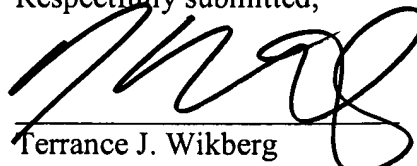
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